

ITEMS OF INTEREST.

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Notes from the Profession.

MEETING OF THE AMERICAN DENTAL ASSOCIATION.

[Concluded from last number.]

Reported for the ITEMS OF INTEREST.

Report of Section VII., Physiology and Etiology, being next in order, was read by its Chairman, Dr. W. C. Barrett, of Buffalo.

The Doctor reviewed the present state of our knowledge in regard to the etiology of dental caries. He considered the idea that the teeth were predisposed to caries on account of our diet being deficient in lime salts exploded. It is a well known fact that children, and pregnant women, those to whom a diet rich in lime salts has been so urgently recommended, excrete those same lime salts in large quantities. This he considered sufficient evidence that the system is abundantly supplied. He considered the predisposition to caries so markedly shown in some cases, to be due entirely to nerve lesion. The idea that dental caries, and dental lesions, were largely due to habits and surroundings associated with an advanced civilization, and that they were comparatively modern, he did not believe. He had carefully examined the evidence upon that point, and collated observations embracing nearly all the known races of men, under all conditions of climate and diet; he had delved into the past, and examined several large collections of skulls, containing specimens of the earliest and oldest races known; he had carefully examined the records of others he named, who had done likewise, and from this mass of evidence he had deduced the fact that dental caries are wide spread; they are confined to no climate, nation or race; they have existed from the earliest times to as great an extent as they do at present, and are not dependent upon diet or habit of life, except so far as they may seriously effect the general health. In this age, when science is making such rapid strides, we must cut loose from old theories and doctrines and study the present in the light of the present.

He referred to the experiments of Dr. Miller, of Berlin, saying that he seemed to have at last unraveled the mystery surrounding this

obscure disease. He had traced the matter closely, and from innumerable experiments, tedious and trying in character, had arrived at the conclusion that the initial lesion in the enamel was due to an acid; but when the dentine was reached the destruction was due to a micro-organism. He had isolated from the multitude of microscopic vegetable and animal organisms found in the mouth a specific fungus which he believed to be the real cause of dental caries. He had cultivated this fungus out of the mouth, studied its habits, and had actually produced artificial caries by its agency out of the mouth, so nearly like that we find in the mouth, that experienced observers had pronounced them identical.

This is a great step in advance, and seems to be almost conclusive that his theory is correct. As far as he knew, artificial caries had never before been produced. We have not yet reached the practical bearings of this discovery. But few men have the slightest idea of the extreme care, patience, and untiring industry Dr. Miller has brought to bear upon this subject. He would not for a moment underate the labors of those who have preceded him, or of those who, like him, are still at work in this interesting field; but he questioned if any one had entered it with greater enthusiasm, or had so systematically pushed his experiments step by step. He exhibited several forms of cultivated fungus from the mouth, prepared by Dr. Miller, stating that it took at least a year to isolate them as they were then shown. Each separate fungus has its own characteristic form of growth, by which it is distinguished from the others. Of the number found, only one, so far as at present known, seems to be concerned in producing dental caries. Dr. Miller states that the softening of dentine is a true decalcification, and is in advance of the fungus growth.

The reading of the report was followed by a general discussion of the subject, which evidenced some little misunderstanding in regard to the part played by the various low forms of life found in the mouth, and the real nature of Dr. Miller's experiments, which led Dr. Barrett to farther explain, that the growths Dr. Miller had demonstrated were not bacteria, they are fungus or vegetable growths, or in other words, ferment. There is a distinction to be drawn between putrefactive organisms and ferment. The artificial caries Miller had produced, were produced by ferment. Starch and sugar in various forms, we may say, are almost constantly in the mouth, they are especially favorable to fermentation. Decalcified dentine affords a favorable lodgment place for the ferment fungi—these fungi develop lactic acid—the especial acid of fermentation; this acid causes decalcification of dentine and leaves a spongy mass especially favoring the growth and development of fungi; this process goes on with constantly increasing activity. Nearly all observers, however much they may differ on other

points, agree on this—that fungi play an important part in dental caries. In view of the great diversity of opinion in the past, we may consider this a great step in advance.

Dr. Frank Abbott, of New York, contended that caries is an inflammatory process,—that the living forms found there are incidental, and follow decay, but are not to any great extent the cause of it. There is no acid in the deeper parts of decay, neither are the organisms found there, this is distinctly stated in Dr. Miller's papers.

The discussion was concluded on Thursday morning, the Wednesday evening session having been set apart to allow Dr. J. L. Williams, of New Haven, Connecticut, to exhibit by means of a stereopticon a number of micro-photographs he had prepared illustrating the development of the teeth and adjacent tissues.

Dr. Williams has been investigating for some time the embryonic development of the teeth, and has arrived at conclusions very much at variance with the ideas previously recognized and embodied in the text books. So different are they indeed, that some have questioned his drawings, and intimated that they were rather the outgrowth of preconceived notions than correct delineations of what he had seen. His purpose in coming before the association was to show that this was an error. He had with him photographs of the drawings in question, (which have been published) and micro-photographs of the objects, which were shown on a screen by means of a stereopticon, so that they could be compared. He had also the objects themselves, and several microscopes, and invited all interested to examine them.

He first exhibited drawings showing the primitive dental groove of Goodsir, following this by micro-photographs of a section probably prepared in much the same way that Goodsir prepared his. There was a striking similarity, and the drawing would have answered very well for the object exhibited. He then called attention to an evident want of tissue at various points ; this had first attracted his attention, and led him to suppose that it had been destroyed in preparing the specimen. This he demonstrated to be the case, and exhibited a section with this tissue in place, giving it a very different character. He concluded that the errors of the past were entirely due to want of care in preparing the sections ; or rather, to the fact, that means and methods now used were then unknown.

He then passed to the formation of enamel and dentine, showing first a drawing taken from a text book—calling attention to vacant spaces at various points, and special attention to what seemed to be fragments of tissue that once filled those spaces, and expressed surprise that all though clearly shown in drawings made perhaps a quarter of a century ago, it seems not to have been noticed. He then exhibited a section of his own, also showing vacant spaces that for a

long time had been a puzzle to him. The evident want of continuity was evidence that something was wrong, but as specimen after specimen exhibited similar appearances he could not account for it until he found that while placing the covering glass over the object it was torn apart and disturbed. These tissues in the prepared specimens are very delicate, and with all the care he could use it was seldom the mounting was complete without some slight displacement. After this was noticed it ceased to be a source of error, as allowance could be made for it, one specimen correcting the other.

He then exhibited specimens where these tissues were nearly intact, and called attention to the accuracy with which they had been delineated in the fragments previously noticed. It was marvelous that these fragments should have been so carefully drawn, and yet the fact of their being fragments should not have been recognized. He then exhibited a number of micro-photographs illustrating the various stages in the development of the dental organs and their surroundings. As drawings from these have been published, and any description would be unintelligible without them, we refer to his various articles in the *Dental Cosmos* upon this subject. We think his purpose in coming before the Association was fully accomplished. He clearly demonstrated the truthfulness of his drawings to the satisfaction of all.

After the discussion on the report of Section VII had closed, on Thursday morning, the report of Section I, "Artificial Dentistry, Chemistry, and Metallurgy," was read by its chairman, Dr. William H. Trueman, of Philadelphia. He noted the general use of late, of the term, "Prosthetic Dentistry," to designate what has been known as Artificial Dentistry; and thought that it conveyed a better idea of this branch of dentistry, as it is now practiced, than did the older name. (Later on, the Association accepted the suggestion, and changed the name of the section to "Prosthetic Dentistry, etc.") He had little to report that was new or interesting, and regretted that it was receiving so little attention, except in pivoting and bridge work branches that seemed to interlock with operative dentistry. He regarded the preservation of roots, either as supports for substitutes, or to preserve the natural contour of the mouth, as worthy of attention.

He called attention to Dr. E. M. Flagg's (of New York) contribution to this art. A few years ago Dr. J. Foster Flagg, of Philadelphia, published a series of articles on "Dental Pathology," in which he treated at length of the various temperaments, and their relation to Dental Science and Art. Dr. E. M. Flagg has culled from, and tabulated those portions which we may term "expressional," bearing upon the form and physical peculiarities of the individual; and their relation to the form, relative size, shape, character, color and arrangement of the teeth; with special reference to the selection of

artificial substitutes. He considered these tables valuable; the Doctor has shown great care, and a thorough knowledge of the subject in arranging them; and has made useful a mass of knowledge few knew of or properly appreciated.

He reported that two papers had been received, one by Dr. John Allen, of New York, the other by Dr. J. A. Robinson, of Jackson, Michigan.

These were then read by their authors.

Dr. Allen's paper, treated in a general way of the qualifications required to make a good mechanical dentist; and of the necessity of combining close observation with manipulative and artistic skill to produce the best results. He thought a really good prosthetic dentist fully the equal of a good operator; both required the same *degree* of talent, though perhaps of a different kind.

Dr. Robinson, in that portion of his paper relating to artificial dentistry treated it from an educational stand point. Treating of chemistry, he suggested, whether there might not be some action on metallic fillings from the presence of an oxydizing agent in the dentine itself, possibly conveyed there through the dentinal tubules. He referred to the discoloration found on the surface of tin fillings, either tin alone, or alloyed or used in combination with other metals, and of amalgam, and the discoloration of the dentine in contact with them; and of the difference noticed in the preservative action of fillings independent of mere mechanical protection. He suggested that the value of a filling in this respect might depend upon the solubility of the product of oxidation, or its power to prevent fermentation, or perhaps a more comprehensive term would be in view of the discussion just closed, its value as a germicide; and how long it might retain that property. He suggested that the oxidizing agent might be chlorine, or one of its compounds.

Treating upon metallurgy, he noticed that the effect of even a slight quantity of alloy in changing the character of metals, and as an illustration, referred to tin—perhaps the best metal we have for fillings so far as preserving the tooth was concerned, but too soft to withstand attrition. By adding a very small portion of platina, and then a small portion of gold—so small a portion that we would hardly expect it to have any effect, he found the change was very notable. The alloy has the property of hardening under manipulation quite rapidly; and yet practically its softness and cohesion under the instrument was not impaired. He had seen crown fillings made with it, exposed to attrition, that had stood quite as well as gold. After four years wear, the edges, even, were quite thin, seemed uneffected. Such an alloy cannot be made into foil, but must be made into a convenient form for use by some means that does not harden it. It was therefore cut into

delicate fibers. In this form it was readily placed in position, and under the mallet works with a putty-like softness, but when thoroughly impacted had a hard resisting surface. The Doctor also stated that he had found equal parts by weight, of carbolic acid and caustic potash, ground together, an excellent application for sensitive dentine. He applied a small portion to the cavity, let it remain a few minutes, and then wiped it away, repeating if necessary. He also applied it to exposed pulps, or to aching teeth (from pulp exposure) to obtund the sensitiveness preparatory to treatment. He thought it seldom, if ever, needful to destroy a pulp. It sometimes gives a little pain—but not severe. He modified it occasionally by adding oil of cloves, or creosote, as in his judgement the case might require. He had used it about twelve years with increasing satisfaction.

The report of the section was passed without discussion.

The report of section II, Dental Education, was read by its chairman, Dr. C. N. Peirce, of Philadelphia. We do not feel able to give a resume of this report ; it will bear and should have, a careful reading. He announced that at a meeting of the representatives of all the dental colleges, they had unanimously agreed to require a preliminary examination hereafter. The standard agreed upon, was a good common school education. This announcement was received with applause. The report was discussed quite freely ; the action of the colleges being highly commended. Resolutions were passed endorsing this action.

The report of Section III, Dental Literature and Nomenclature, was read by its chairman, Dr. J. Taft. While interesting, it cannot be abridged without losing much of its value.

The report of Section IV (Operative Dentistry) was read by its chairman, Dr. E. T. Darby, of Philadelphia. The only matter of special interest was his reference to what is known as Herbst's method of packing gold, to which attention has recently been directed. A note was read from Dr. Bödecker, (now in Europe on a visit,) who has spent some time with Dr. Herbst, and has seen him operate ; he considered it the greatest improvement in packing gold the profession has ever known. After the report had been read, Dr. Barrett said Dr. Miller on his recent visit to this county had brought with him some of the gold Dr. Herbst used. It was a peculiarly soft non-cohesive gold, yet it seemed to work well, used as Dr. Herbst used it. He did not succeed nearly so well with the soft gold we have here. He explained, Dr. Herbst used points shaped very much like a cone, they were perfectly smooth, some quite small, and were revolved quite rapidly in the dental engine. They quickly become coated with gold, to remove this, he has at hand a block of tin hollowed out on which the point is pressed from time to time, and kept clear in this way.

Dr. A. O. Hunt, of Iowa City, had experimented with this method. At first he had difficulty in fixing the gold. This he overcame by using a large mass, it wobbled around at first but soon seemed to fix itself and he then had no difficulty in adding gold to it. The gold seemed to pack nicely and he thought favorably of the method. His work with it was only experimental and out of the mouth. His instruments were made from the drawings accompanying Dr. Herbst's article as near as they could be without having seen the originals. He found that they coated quickly, and used very fine emery cloth to remove it. He has used several makes of soft gold foil, but could hardly say that there was any difference between them. The more he tried this method the better he liked it, and had no doubt but that a good operator adopting it and persevering in its use would be able to do good work, perhaps in less time than by other methods. He had critically examined the fillings and thought the cohesion perfect. He does not keep the instrument in constant contact, but while it is revolving rapidly used it very much like an ordinary plugger point.

It seemed to be thought that the heat evolved by the rapidly revolving point annealed the gold in the cavity, that was the only explanation why gold so non-cohesive that it could not be used cohesively by other methods, readily united by this.

On Friday morning the election for officers was held with the following result: Next place of meeting, Minneapolis; President, Dr. J. N. Crouse, Chicago; First Vice-President, Dr. Foster; Second Vice, Dr. Rich; Recording Secretary, George H. Cushing; Corresponding Secretary, A. W. Harlan; Treasurer, George W. Keely. The report of Section V remained to be considered when we left. The exhibition of Dr. Williams was considered part of this report.

For sensitive dentine, Dr. T. A. Robinson, it will be seen in our report of the American Dental Association, recommends equal parts by weight of carbolic acid and caustic potash ground together. He applies in small portions to the cavity and in a few minutes wipes it away, repeating if necessary. He also finds it good as an application to aching exposed pulps preparatory to treatment. He thinks it seldom needful to destroy exposed pulp.

Filthy.—Dr. Brown of Missouri reports to the State Society, a man who wore a partial underset of teeth for fourteen years without removal.

As an antiseptic, Dr. Sitherwood, of Illinois, prefers listerine to carbolic acid. He uses it in treating exposed pulps.

BRIDGE WORK, &C.

DR. PRICE, BIRMINGHAM, ENG.

[The following strictures are perhaps too severe and some of them unjust. Will not some of the advocates of this class of work give us their side of the question.—ED. ITEMS.]

The term "Prosthetic Dentistry," used in America, seems scarcely to express what is needed in the education of the practitioners of our specialty. Whether the teeth are mounted on a "plate," or the piece be made in the form of a "bridge," or "fixture," limits to a large extent their discussions, and to some extent influences opinion in this country; but cleanliness, the health of the mouth, and the inconvenience attending accidents to the artificial piece will limit the use of these contrivances. The common sense of the patient and the reputation of the dentist are against them. No matter how perfect the adaption of the "bridge," or how small the portion of the membrane of the mouth covered, the fluids of the mouth, particles of food, &c., will find lodgment under; and, in spite of every effort to clean them away, will remain to vitiate the breath. But the breath will not only be poisoned, the mouth itself will become diseased; for it must be remembered that the gums are covered with epithelium which must be removed as fast as it is formed, or the portion of the gum which has been covered will become "red and vascular," and bleed on the slightest touch. The mouth will be painful, offensive and incapable of bearing the pressure of any artificial contrivance at all.

Foul breath and sore mouth, abscesses, and accidents to the piece, one would think insuperable objections to permanent structures for the mouth. Even with an ordinary plate, which may be taken from the mouth in an instant, the fracture of a tooth, the breaking of the plate or bands, especially at table and when from home, are accidents that, even to persons of strong nerves, are exceedingly awkward and embarrassing; but in the case of a "fixture denture," no matter what the accident—a tooth may break, the piece may give way on one side, or the "bridge" itself snap through, and nothing can be done till professional aid is secured. The shame and confusion experienced on such an occasion was vividly sketched to the writer by a lady who had witnessed such a scene at a wedding-breakfast in the States, where, she affirmed, there is not a tithe of the delicacy respecting artificial teeth as here. In this case, two good teeth had been sacrificed for "points of attachment," a considerable amount of time being taken to bring another root into something like a healthy condition, and then, almost as soon as the piece was secured, a tooth came off, and finally a pin gave way, which besides the confusion and annoyance to the lady, hurt the mouth, and was the cause of "bridge" being sent back to the dentist to be converted into a plate.

PARTIAL AMAUROSIS OF THE LEFT EYE, AND NEURALGIA.

JOHN S. SMITH, D.D.S., LANCASTER, PA.

In the June number of the ITEMS appeared a report of a case of amaurosis dependent on dental irritation, which was read before the American Medical Association, by Dr. W. W. Allport, of Chicago. A similar case occurred in my practice, some time ago, which I will put on record, hoping it will add some further interests in such cases, as viewed from the surgico-dental stand-point.

HISTORY OF THE CASE:

The patient, a middle-aged man, of the nervo-bilious temperament, of good habits and constitution; used tobacco in moderation; good liver, and free from any syphilitic taint; had used quinine for malaria; no anaemia. He had suffered from facial neuralgia at intervals for a year or more, but never would consent to even have his teeth examined. The neuralgia had become so severe that he at last concluded to put his case under treatment. When I first saw him professionally, he said: "Of late my left eye has given me much trouble, and it is with the greatest effort I can see to read large print, while the small print blends together, and cannot be made out by the affected eye." He also complained of pain on the face, corresponding to that in the eye. There was intolerance of light, and a great profusion of tears, and dimness of vision.

In the early summer, while on a visit to a friend in Philadelphia, he consulted an ophthalmic surgeon, but his treatment was followed with no relief. He now resolved to see if his teeth were the cause of the trouble, as the neuralgia could be endured no longer.

DIAGNOSIS:

It will be noticed in the above case that the eye had been seriously affected, and in order to study this affection in connection with the foregoing history, it was necessary to watch the case very closely.

It was noticed that during the most severe attacks of odontalgia, pain was felt in the eye, with a greater profusion of tears; the vision was also more impaired at these paroxysms. We directed our attention to remote cause, of a reflex nature, transmitted through the agency of the fifth pair of nerves, called the trigemini, or trifacial.

The fifth is the nerve with which oral surgery has, perhaps, most to do, and to which the pulps of the teeth are most closely allied. From observations made, it is well known that irritations in remote portions of the trigemini may be transmitted through the ciliary system to the nervous apparatus which serves for the reception of luminous impressions. These produce an increased excitation, and an engorgement of blood vessels with inflammation, and give rise to amaurosis.

"It is a well-known fact," says Von Stellwag, "that this is by no-

means an uncommon occurrence for intense irritations of one or the other division of the trifacial nerve to lead to hyperæsthesia," or engorgement of blood, and later to hyperæmia and inflammation in the territory of the ciliary nerves. Hyperæsthesia of the ciliary nerves may also be induced by exfoliation of an alveolar process, malformed or misplaced teeth, and certain affections of the antrum. Suppurative pulps of teeth, calcification, exostosis, the abnormal condition of the cement of the fangs of teeth, in fact any long-continued irritation about the jaws, may produce amaurosis in certain individuals of the inflammatory diathesis. It is equally well known that amaurosis—or affections of the optic nerve—is not in all cases traceable to dental irritation. It is the exception, and not the rule, for dental irritation to produce any trouble of the eye. The use of tobacco is a prolific cause of amaurosis, and should be prohibited in the treatment. Anæmia, from excessive hemorrhage, will bring on the trouble, and in the treatment should have attention. When induced by intercranial causes, of course the amaurosis will be permanent, without any hopes of relief.

In making my diagnosis it was found that the first superior molar was quite sensitive on percussion, with recession of the gums around it, and absorption of the lingual portion of the alveolar process, leaving the palatine fang at least two-thirds exposed; the second molar was also somewhat loose and painful. This point seemed to be the focus of irritation. The pain would start from this region, shooting along the dental or maxillary nerve to the diseased superior bicuspid upon the same side, and toward the inferior bicuspid of the lower jaw; the latter was filled with tin, in pulp canals; the superior bicuspid with amalgam; the first superior molar with a large gold filling in crown. This tooth had no occlusion. Every indication led me to suspect either calcification of pulp, or exostosis of the bucal fangs of this tooth.

There are certain symptoms accompanying this abnormal condition which will help our diagnosis:—sensitiveness to hot and cold drinks, and to cold currents of air; uneasiness; shooting pains—the pains being intermittent in character, and more severe after lying down. Some of the conditions from which we may suspect this result are:—a sound tooth, but without occlusion; teeth filled near the pulp, without protection; recession of the gums, and absorption of the alveolar process.

TREATMENT:

Keeping in view strict conservative principles—which in all such cases should be observed—it was decided to treat the upper bicuspid, and fill the pulp canals and crown.

As we suspected calcification in the pulp of the molar, we extracted it. After extraction we found this to be its condition. One

of the fangs, and the pulp chamber, showed marked formation of new cement. The pulp was shriveled, resembling shavings of horn.

The amalgam stopping was removed from the upper bicuspid, and a sloughing pulp found beneath it. This tooth was also subsequently treated and filled. The neuralgia was soon controlled without direct treatment, and the eye regained its normal condition in about three weeks after the operation, since which there has been no return of the complaint. From the symptoms present we were led to believe the teeth to be the primary cause of the above abnormal condition which the eye assumed. It proved to be both calcification and suppuration, accompanied with exostosis of the fangs. This shows that in the treatment of the eye these pathological conditions should not be overlooked.

Timely consultation with a competent dentist will often save much unnecessary worriment, and much danger and suffering to the patient.

DENTAL HYGIENE.

The character of the work of the Dental Practitioner is so peculiar, that it stands alone, alike in its arduousness and in the long list of ill consequences its pursuit engenders. The strained postures, the incessant standing, together with the delicate adjustment of muscular action, tax the regulating centers of man's brain, and there are other agencies at work, which sooner or later sap the vitality, and induce a premature old age. From morning till night, he has to set his attention as in a vice, he is compelled to rivet all his mind upon his work, he has a never-ending succession of nice and often recondite manipulative problems to solve. This labor, day after day, must be carried on indoors, often in hot ill-ventilated rooms, rooms unfitted for the purpose, and offering every variety of ill-sorted conditions to the dentist, should his mind ever take into consideration questions of thermal units and north and western lights. Who but a dental surgeon knows what the word "nasty" means? Nasty in their habits, nasty in their tempers, suffering humanity betake themselves to the dental workshop, and expect there to find the courtesy and forbearance of which the dentist stands in such urgent need. The ranks of the profession show, alas, only too plainly the natural outcome of all this. Prematurely breaking down in health, is now-a-days a common heritage, from the success of a rising dental practitioner. The wear and tear of life is too much, and outraged Nature, taking her revenge, lays low the offender against her laws, stricken by one of the many nervous ailments begun to be set apart as the peculiar property of our unfortunate profession. Few would controvert the truth of all these statements, or stir a finger to check a growing evil. So it is that this

subject of such vital import receives but little attention, and the struggle for existence among the many, and for fame among the few, fulfil the office of Juggernaut's Car and crush the vitality out of their victims. Much can be done to ameliorate this, much in every way; and were the evil recognized more widely, and were the sorrows of failure in strength to be attributed to their true cause—working during prolonged periods in unhealthy rooms—more care would be taken in banishing noxious influences and in correcting the sins against hygiene and common sense now too rampant. What are these sins, and how are they prejudicial to health?

Perhaps no more potent cause of lung complaint—a cause at once predisposing and exciting—exists than that to which the dental practitioner is peculiarly subject, namely, working for many hours in one room. It usually happens that he comes either from the open air, or at least from other rooms, which are kept well freshened by constant opening of doors and windows, and then he enters a room always hot and too often ill-ventilated. His patients fear draughts and hate chilly rooms, hence he keeps his consulting room at a high temperature, and during the busy work of the day no opportunity usually occurs to change the stagnant germ-laden vapour which passes muster for an atmosphere. When work is over, he leaves this for the cold outer air. Thus the sudden changes and vitiated air which slowly and surely play their deadly part in sapping energy of brain and impairing deftness of hand. All workers in hot rooms, sooner or later, pay the penalty, and anaemia once initiated makes rapid headway. Nor is the evil of the matter ended here. From the very nature of his occupation the dental practitioner has to assume and retain a constrained and unnatural posture during the greater part of the day. And here again, exists a most prolific source of after trouble. The visceral cavities must be free from external pressure if the functions of the viscera are to be efficiently performed, a condition only possible in the erect or supine positions, while nervo-muscular diseases find in the cramped and constrained posture a ready seat for their development.

Nor is it difficult to explain the reason for this. The advanced physiology of to-day tends to curtail the belief in vital theories, and for these to substitute physical ones. The circulation in the body resolves itself into a physico chemical problem, and hence every kink and unnatural twist and turn of the body must necessarily impose some impediment to the circulation, and hence establish a barrier to the complete and efficient nutrition of the part.—*British Journal of Dental Science.*

Promptness, system and thoroughness accomplish wonders.

PROTECTING PHOSPHATE OF ZINC.

Several years ago a dentist by the name of Ludwig traveled through the country, giving instructions in a process which he claimed when applied to oxychloride and phosphate fillings would prevent solubility, and render them more permanent. Of course we bit and paid his fee. Now while the effects were less than he claimed, yet we never regretted the payment of the money. This process consisted of rubbing heated soapstone points, prepared for the purpose, over the surface of the filling, making it smooth, and imparting a beautiful polish, and inciting the patient to exclaim : "Why, Doctor, how nice and smooth that seems—just like the tooth itself!" instead of "Doctor, how rough; can't you do something to make it feel better?" and to which you can only reply: "Never mind, the effect of mastication will bring it around all right." Now the satisfaction of having the patient pleased is compensation for the expenditure.

But further, we thought, if it is good for these fillings, why not for Hill's stoppings, gutta percha, etc.; so we tried it, and found that after the materials were placed in the cavity, and the application of soapstone, the filling could be adapted to the walls as thoroughly as any filling in use, and not drawn away from them by the adherance to hot metallic instruments, as is the case where they are used; besides, a beautiful, smooth surface is secured. Now this is not new, as there are probably 12,000 dentists in the United States that know all about it, but there may be a few who have not heard about it as yet. This is for their benefit. However, instead of cursing Dr. Ludwig, as others have done, we have always been full of gratitude toward the "humbug" the doctor practiced upon us.—*Dr. Taft in Dental Register.*

The Consequence of Quackery.—The *Patriot* says that the eldest son of Mr. Stephanus du Toit, of Cape Town, while suffering from tooth-ache last week, administered, on the advice of a friend, some poison to the affected tooth, with the very lamentable result that a few minutes afterwards he got serious convulsions, and having just time enough to cry out to his father, "Papa, I die," he expired. It is surmised that the poison either got in his blood through the application to the tooth, or that he swallowed some by mistake.—*Dental Science.*

The substance of an artificial tooth is made principally of spar and silex; the gum color, of the purple of Casius and teroxide of gold; the bluish tint is platinum; the yellowish tint, oxide of titanium.

If you would have your practice stand by you, you must stand by your practice.

DENTAL PHILOSOPHY.

AN INTERESTING COMPARISON OF DENTISTRY WITH OTHER VOCATIONS,
BY C. C. DILLS, D. D. S., HARTFORD, CT.

(Communication to a Local Paper.)

It seems strange, in the face of facts to the contrary, how people think dentists "make money." Thus, in your report of an interview with me, I am asked: "How is it that all these dentists get so rich?" As I knew the reporter had in his mind the recent \$7,000 dental bill in New York, by way of pleasantry I acquiesced in his position, and referred him to the bill as sufficient answer to his question. But the public should have facts, and a few bearing on this matter can but be interesting, and tend to quiet a large class who always think some other business is better than theirs. Now, it so happens that the very dentist rendering the bill alluded to, and who is noted as the highest price dentist in the world, has not one cent to show for his life work! While this fact might prove nothing special in itself, it also happens that like impecuniosity is characteristic of our most noted operators.

Of course it will now be asked, with increased vigor, "how comes it that even high priced dentists don't get rich?" I might answer this in several ways, or disclaim that my position requires me to do more than give the bare facts stated. Certain it is—to answer in a general way—I disclaim that nature has made any exception in favor of dentistry as a vocation, if, in fact, she favors any one business in any substantial sense. If, perchance, sometimes one business offers superior inducements, the sure influx to it soon counteracts all advantages, by reaction. Thus, dentistry being something of a new profession, a few years ago there was a rush into it, and now it is overrun—there being no less than 15,000 dentists in the United States to-day, with a yearly increase of about 1,000, Hartford coming in for its full share.

It is said that 97 per cent. of business men fail of complete success; I simply assert that, dentistry does not afford its three per cent. of the successes! As to the congruity of some high fees, and failure at last with us, it has plenty of parallels elsewhere, especially in New York city, whose fees are just now, under consideration. Wall street, with its enormous profits at times, affords no exception to the 97 per cent. rule of failures. Ward, with all his opportunities, ran behind seventeen million in a few years. Sure enough, what chaos and confusion throughout our business! One would think we may have made some mistake after all, in our theories of finance, or the tariff, and that matters could not have been much worse had we continued the greenbacks or discontinued the "protection." The rule in business certainly is, worry and failure; and no class of men live from *hand to mouth* or *look down in the mouth*, more than dentists.

But this community has no reason to complain of dental charges generally. True, a few dentists, like many other people, may heartlessly ignore the value of money to some with whom they deal. Particularly have I often thought of the disparity between city charges and the ability of our farming community to pay just now. Twenty-five or a hundred dollars is sometimes taken for slight return when it represents the profits of months, and the taking of which occasions no little suffering and self-denial.

“Man’s inhumanity to man
Makes countless thousands mourn.”

And while it is said that nature is kind to us in the ease and manner of our death, usually, we can scarcely claim that she is kind in our life, by prompting purely philanthropic transactions between human beings as a rule. The universal desire for gain, and sometimes the demand for bread, makes unwonted havoc with every business these days.

As the old style, straight forward, commercial man can hardly hold his own with modern competition and rascality, so the average competent dentist is worried in his fight with quacks. The few fortuitously successful are exempt, but the others must conform their fees so closely to prices for inferior work as to preclude the possibility of getting rich. It will no longer do to say that merit will always be recognized and rewarded. The public is not yet educated up to a proper appreciation of dentistry, or to the wear and tear of a dentist’s work. Many times are we conscious of performing operations as genuinely worth ten times what we get for them as one dollar is worth another. Many a set of teeth do we insert for ten or fifteen dollars where our worry alone is worth \$100, if human nerves are to valued at anything. Yet some people cannot see why a man of ability may not retain his self respect and incur such worry for three or four dollars—at which sets of teeth are really advertised in New York city. I would not be understood as complaining here, or unduly disparaging my own profession ; other business men are ignobly worried to death as well. I only undertook to show this general average of vocations, and that dentistry is just like every other business, DESPICABLE.

Cure for Headache and Facial Neuralgia.—As a local application for headache and facial neuralgia, take 1 part oil of mustard and 4 parts alcohol ; place a few drops of this on the palms of the hands and apply to the affected parts. Almost immediate relief will be obtained. I think if our readers will try it, they will say it is the best thing they have used. I have quite a reputation for curing headaches with it.—F. A. McAULEY, D.D.S., in *Ohio Journal*

A MOTHER TO MOTHER'S.

ERUPTION OF THE PERMANENT TEETH.

[From the Southern Dental Journal.]

When your baby's first *big jaw teeth* came in, at the age of perhaps twelve months, they were apparently as far back in the little jaw as a tooth could well be placed ; yet as the child entered its third year, you found there was then ample space for another big tooth, back of the first ; the jaw having evidently *lengthened out* to the rear, the front teeth still having their old fixed places and relative positions.

Caring for your child's teeth yourself, as I am confident you will do, you will note all the changes that occur from time to time, and consequently will find that the jaw continues to *make space* back of the teeth, until, at about the age of six years, still another new tooth will make its appearance beyond the two baby molars which have been doing good service for three or four years. You must not suppose this new six year molar belongs to the "baby set" of twenty teeth, as do many ignorant mothers. You must not think it of little value under the false notion that it will be superceded by another. This, and the one that will come behind it at twelve years of age, and still a third—called the wisdom tooth—which will come behind that one, at a later age, all belong to the second, or permanent set. They have no predecessors and will have no successors.

Dr. Welchens calls the first molars the "corner stones of the arches ; the outposts and main supports of the whole process of second dentition."

These teeth are of special importance, for several reasons : In the first place, they are ready for service while the baby teeth are being lost and replaced ; and in the second place, they are the largest teeth in the permanent set and in the center of the arch, therefore the principal ones in the whole wall. They are also exactly opposite the *duct* (or aperture) which furnishes the largest portion of saliva, for the preparation of food for digestion.

As, for some as yet not well understood cause, they are more liable to early decay than any of the later teeth, they must receive special care and attention ; and on the first slight appearance of decay, be promptly filled, and, if necessary, *refilled*.

Dr. Wm. H. Dwinelle speaks of these teeth as being "the largest of all the molars, and appointed to the post of honor of bridging over the critical and dangerous gulf between youth and maturity ; and as making normal mastication possible while the temporary teeth pass away and are succeeded by the permanent."

Watch for these sixth year molars, then, and give them your most careful attention. They are liable to be less dense than the other

teeth, and may require filling and refilling, but they are of sufficient importance to justify it, for with proper care and suitable diet they will improve in texture as they grow older.

After these four teeth have come into place, the little "front teeth" soon loosen and fall out, one after the other.

The baby-teeth are exchanged for new ones in about the same order that they erupted, but in about twice the length of time.

This *replacement* is preceded, as we have seen, by the eruption of these "sixth-year," or first, four permanent molars (or jaw-teeth) and followed, at about the age of from eleven to thirteen by four others, still further back, as the jaw has again extended in length—the latter being known as the "twelfth-year" or second permanent molars. The six-years intervening between the eruption of these additional eight jaw-teeth are occupied in exchanging the twenty baby-teeth for twenty permanent ones—none of the *replacing* teeth being double teeth or molars.

The eighth incisors, (or central front teeth) should all be exchanged for similar but larger and stronger ones, by the time the child is nine years old.

Then—passing over the canines (stomach and eye-teeth) as was the case with their eruption, the eight baby-molars are exchanged—not for new molars, but for another class of teeth, not found in the first set, called *bicuspid*s, from their form (a *cusp* being a point or prominence)—the eye-teeth for instance, having one cusp, and the bicuspids two.

These bicuspids, being small *half-double* teeth, are not infrequently pointed out to the dentist by would-be-wise patients as evidence of not having yet shed all the baby-teeth !

The eight bicuspids being usually in place at about the age of twelve years, the canines (or stomach and eye-teeth) are next replaced by others of the same shape, but larger and stronger; the twelfth-year molars make their appearance, (sometimes while the canines are being exchanged), the eruption of the third molars, or wisdom-teeth) completing the full adult set of thirty-two teeth, without which no mouth is in perfect condition to provide for all the wants of the system. The eruption of the wisdom-teeth varies from the ages of fifteen to fifty years of age; and they are sometimes the cause of severe suffering, from not having sufficient room developed in the jaw, for their occupation; the jaws and teeth not having been properly exercised in mastication.

An Arab proverb reads: "He who does not masticate well is an enemy to his own life."

No arguments for the care and preservation of the permanent teeth need be adduced beyond those already given in regard to the temporary.

"Their preservation and usefulness for speech and mastication till advanced life; the favorable impression made upon the general health by the ability thoroughly to masticate the food; the comfort of a pure breath and wholesome saliva; and the agreeable effect produced upon others by the exhibition of a clean and healthy mouth, are surely reasons enough to induce all to pay that attention to them upon which their appearance, preservation, and usefulness depend."

The suffering in masticating food with sensitive or aching teeth, or the inconvenience when a number of them is lost, "can only be properly appreciated by those who have been unfortunate enough to have had some experience in this direction." Speaking with distinctness and comfort depends much upon a full and even set of teeth. If they are crowded and irregular, or if there is now and then one missing, it affects the voice at once and is very annoying to others who are obliged to listen to it. Public speakers often fail to produce the effect they desire, upon their hearers, from this cause, and are not conscious of it themselves.

Nothing contributes more to the beauty of the features than a perfect, regular, clean set of teeth, while a neglected, filthy, diseased mouth is painful to all beholders.

The opinion is held by those who have given this subject the closest study, that "upon an average, life is shortened one year for each tooth lost. If this is true, as it must be to a great extent, how important the preservation of every tooth in a healthy and working condition! The hygienic care of the teeth is so *understandable* and simple, that no one is excusable for not carrying out its indications most perfectly.

"When disease has attacked the *teeth*, usually but little or no concern is manifested about it. If the *eye* or the *ear* becomes diseased, the utmost solicitude is at once manifested, and no effort for restoration is left untried. Time, money, and the highest skill are all called into requisition—and used lavishly, too, if a cure can but be obtained—and yet the loss of an eye or an ear, usually, will not affect the *system* at all. But the teeth may become diseased, and the patient suffer for months and years, and even sicken and die, without any one considering that disease of the teeth could exercise any influence beyond the cavity of the mouth, while the truth is, when the teeth are diseased, every organ and every fiber in the body suffers as a consequence."

It is said, on the authority of the last United States census, but one person in 80 has sound teeth. It is also said by those who have made a study of these things, that one hundred years ago one person in every 25 had perfect teeth, while two hundred years ago the proportion was one in every five!

What a comment upon the civilization of the 19th century of enlightenment and culture !

THE ORIGIN OF DEFECTIVE ENAMEL.

W. H. EAMES, D.D.S., OF ST. LOUIS, MO.

The various forms of defective enamel which, up to the present, have been known as rocky, ridged, furrowed, cribriform, pitted and grooved enamel, attributed to one cause, viz.. arrested development, will be considered under two general heads "Congenital" and "Non-Congenital" or accidental. The first class "Congenital," will include all of those defects which are supposed to originate during the formative period of the tissue; the second class (non-congenital or accidental), those forms which originate after the complete development of the tissue.

Thus the first class, or congenital, will comprise some of those forms known and described as rocky or ridged enamel ; simple pits in the structure more commonly found on the points of the cusps, but existing often on other portions of the tooth, and especially noticeable in cases where but few of the teeth are affected : grooves or fissures in the coronal surfaces of the bicuspids and molars. The second class (non-congenital or accidental) will include some of the forms of grooved or furrowed teeth not considered in class first, described by Mr. Hutchinson and others as due to syphilis, mercury, etc. ; also, cases presenting the same characteristics which occur later in life, in the form of grooves at the gingival border of the molars and bicuspids, usually considered as cases of erosion, abrasion, denudation, atrophy and caries, which, in my opinion, have a common origin.

The origin of the first class, as I believe and hope to demonstrate, is not due to constitutional disturbances affecting the epithelial structures, such as measles, eruptive fevers, mercury, syphilis, eclampsia, etc., which are supposed to cause an arrest of development and a consequent defective enamel structure, but to a defect in the formative organ, which might, in cases of pits, be termed a blight or death of the ameloblast, or in cases of fissures a "rupture," being the result of a separation of the ameloblastic layer.

Let us glance at the process of development at this period. According to the best and latest authority on this subject the enamel organ envelopes the pulp or dentine organ in the form of a hood, corresponding somewhat to the form of the future tooth. It is composed of three layers, or strata : an external and an internal epithelial layer, and a reticular, or net-like, layer ; the external and internal layers are formed of the columnar cells of the malpighian layers, or layers of small corpuscles, or points, of the epithelium. The internal

layer of cells or ameloblasts, having undergone a change in length, are much longer than the cells composing the external layer. To these I have given the name "*ameloblasts*," as to them is delegated the work of forming the enamel in the same manner as the *odontoblasts* form the dentine. Just how this process of amelification takes place is not definitely determined. Whether it is by direct impregnation of the cell or by exudation, is not essential, so long as it be admitted that the formation of the enamel is dependent on the presence of the ameloblasts. The recent explanations of the phenomena of enamel formation, by Prof. Bödecker, Williams and others, if true, might affect the position taken in this paper, but being in advance of the accepted theories up to the present day they will not be considered.

There is no class of cells more liable to a change of a retrogressive character than the epithelial, and none develop more rapidly. We have seen that the enamel organ is made up of this class of cells exclusively, and is therefore subject to changes noticeable in epithelial structure elsewhere; a blight or death of one or more of the cells of this organ may be looked for at any time. If one or more of the ameloblasts die, or from any cause be wanting in the internal layer of the enamel organ at any point, then will there be a missing rod corresponding in number with the missing ameloblasts, thus forming a circular pit. If the ameloblasts were missing when the process of amelification commenced, this circular pit would extend from the external surface of the enamel to the surface of the dentine beneath; but if the cells die after the process of amelification is partially completed, then the depth of the pit will correspond to the length of the rods which are left unfinished; the cells surrounding the missing ones being unaffected would complete the work assigned to them, and thus the walls of this pit will be normal in character, except, perhaps, in cases where the direction of the rods is slightly changed. Thus is formed the pit described by Wedl and others, "an opening surrounded by enamel rods and the bottom clothed with enamel."

The change which takes place in the walls of these pits from the action of external agents, acids, bacteria, etc., after the tooth is erupted, would result in the forms figured by Wedl and Magitot, and by them described as being filled with pigment, debris of tooth substances, food, leptothrix, etc. The breaking up of the rods forming the walls, giving the pit the form of a pouch or cul-de-sac, may be accounted for in this manner. It may be claimed that this would be but a form of arrested development, especially as this process of amelification is one step in the process of development; but can it be called an arrest of development "dependent upon some constitutional disturbance," as Wedl, Magitot, Tomes and others assert?

We think not. It is not an arrest, but a death or blight of a cell or cells forming the enamel rods, independent of any systemic or general constitutional disturbance.

The next form to which I would call attention—fissures or grooves in the coronal surfaces of molars and bicuspids, is also accounted an arrest of development, a lack of coalescence, a failure on the part of the enamel plate, which, in its development from the cusps toward the center, fails to meet and coalesce. To Dr. Black, of Jacksonville, belongs the credit of the following solution of this defect, which, evidently, is not due to a failure to coalesce, but is rather the result of a rupture of the enamel organ at this point, a separation of the ameloblastic layer, thus separating the rods and forming a fissure.

At the period of development, when this rupture takes place, the pulp has assumed the form of the future tooth, but not its full size. Small caps of dentine are formed over the points of the cusps; the enamel organ has undergone the change noticeable in the form of the cells, and a change is taking place, noticed by Mr. Tomes and others, namely, changing from protoplasm to formed material, ready to receive the lime-salts. This change, which renders the cells stiff and unyielding, commences directly over the points of the cusps and passes gradually out from these points, as centers, toward the center of the grinding surface, and down toward the sides of the crown. The growth of the dental bulb stretches the investing enamel organ, and the points over cusps being fixed, the strain comes directly on the softest and most yielding portion, midway between the cusps, where fissures are to be found. The strain upon the enamel sheet separates the ameloblasts, and thus a break in their continuity occurs which is not repaired, and a consequent fissure is formed in the sheet of enamel. The term coalition implies the union of two separate portions which are independent of each other; but we have seen that the enamel grows from a continuous sheet of ameloblasts, each connected with the other, so that there can be no failure to coalesce. It is true that the deposit of lime-salts takes place from certain points, but the receptacles for the lime envelope the entire crown. These fissures are most frequently found on teeth having prominent cusps, as in such cases the enamel organ is most subject to rupture. These cracks or fissures which before the eruption of the tooth present smooth walls of enamel rods, soon after eruption become discolored and filled with debris and leptothrix, and assume the appearance as seen under the microscope and described by Wedl. This defect in the enamel is of the same origin as the form described as pits—the absence of the ameloblast, differing only in the cause; and most of the defects of this character, no matter what forms they may assume or where located, have this origin where special constitutional disturbances play no part.

Of the second class of cases of defective enamel—the non-congenital or accidental—as was suggested in my paper of last year, I believe a large number to be due to the abnormal action of the so-called absorbent organ. At the time when some of these defects occur the temporary teeth occupy their sockets in the alveoli; the permanent teeth are inclosed in the follicular wall, surrounded by a bony crypt, which, with the roots of the temporary teeth, must be removed to allow them to assume their position in the arch. Nature has provided an agent to do this work. Mr. Tomes designates it as the absorbent organ, composed of a peculiar class of cells resembling the myeloid cells of Kolliker. Wedl designates these cells as *asteo, or odontoclasts*. We believe them to be simply granulation cells. This organ, whatever it may be, is found in close contact with the tissue about to be removed, whether bone or tooth. Cup-shaped excavations filled with this cellular organ are noticeable on the surfaces being acted upon. The removal of the roots of the temporary teeth and the opening of the crypts for the eruption of the permanent teeth is said to be a physiological process, and yet it is so nearly allied in all physical characteristics to the other processes, termed pathological, that it is difficult to distinguish between them, so as to be able to say what characteristics mark a physiological, and what a pathological, process. We are of the opinion that the processes are identical, differing only in the circumstances producing them.—*Part of a Paper read before the Illinois Society.*

A Case in Practice.—A young lady had a third left lower molar with abscessed roots extracted. She said immediately afterward that she experienced a peculiar stinging sensation at the time of extracting, and afterward numbness of that left side of lower jaw; and now, some four weeks after, it still remains sort of paralyzed and the remaining teeth to the centrals, on that side “feel like sticks,” as she expresses it. It seems as though the nerve was injured, but just how it could happen I am unable to state. The question I would ask is, is this numbness permanent, or can something be done for it or will it cure itself in time?

E.

[Let us hear an answer to the above.—ED.]

TREATMENT OF NEURALGIA.

T. W. BROPHY, D. D. S., CHICAGO, ILL.

By far the most common cause of true neuralgia is anæmia. A pallid, pinched-up face; a dull, sunken eye, accompanied by poor appetite: such a person is exceedingly liable to neuralgic attacks.

Romberg, when speaking of anæmic conditions and neuralgia resulting therefrom, says: “It seems as if pain were the prayer of the

nerve, for healthy blood." In the treatment of neuralgia resulting from this cause, the protracted use of tonics must be employed. If, however, the attacks of pain are very severe, they may be relieved by the use of narcotics. But permanent relief cannot be looked for until the system is built up. If the patient suffering from neuralgia resides in a malarious district, quinine is indicated. Lead poisoning is another cause of neuralgia, which I have no doubt has been caused in many instances by the unscrupulous dentist, who has repaired, or had repaired by a tinner, silver and other metallic plates, with soft solder, lead being the chief constituent.

An interesting case of trigeminal neuralgia came into my charge two years since. A gentleman, aged thirty-eight, consulted me with reference to pain located by him in the left second superior molar. A careful examination revealed no caries, no accumulation of tartar, no periostitis, but slight congestion of the gums; also slight inflammation of the face at the terminal branches of the infra-orbital nerve.

My patient requested me to extract the tooth described. I informed him of its soundness, and refused to comply with his request, also informing him that his trouble was neuralgia. I applied tinc. aconite to his gums, and prescribed as follows:

R Prusiate of potass..... 3 j
Eau de Cologne, Tr. aconite (Flemming's)..... 3 j

M.—Sig.—Dilute, if too strong, with water; apply with sponge every two or three hours.

I directed him to keep warm flannel constantly applied to the affected side, and report the following day, when I found his condition much improved, the paroxysms of pain occurring at greater intervals and less severe. I prescribed sulphate of quinine grs. xxiv, in four doses, a dose every three hours, and to continue the local application.

These directions were carefully followed, and two days after he pronounced himself well. Five days after this, however, another paroxysm of pain returned, when he declared that I must extract the tooth; but I dissuaded him, and put him again on the same treatment, with the same result. I saw my patient on Friday, three days after the last administration of quinine, when the information of his recovery was with great pleasure received.

The cause of the neuralgia in this case was by no means clear to me, since the patient was unusually robust and strong, not being subject to any ills. During the subsequent week, however, light was thrown upon the case. My patient informed me that on the Sunday following his last conversation with me, a physician removed from him a tape-worm forty-eight feet in length. Then the cause of the disturbance of the nervous system, and consequently the neuralgic pain,

was at once understood. The disturbance or agitation of the system in this case must have been very great.

The day subsequent to the operation, the local applications to the face were frequently resorted to, to control the occasional paroxysms of pain.

I saw this patient during the past month, when I learned that no trace of neuralgia had since recurred. Another case of neuralgia, of great severity, came to me during the past week. A gentleman of sedentary habits, aged about fifty years. The pain in his case was in the terminal branches of the infra-orbital nerve, also in the supra-orbital. Finding no carious teeth, which would be liable to cause the disturbance, I questioned him in regard to his general health, occupation, etc. I found that he was subject to constipation of the bowels to such an extent that it was necessary to take medicine every morning.

The pain was steady in his case ; it came on about 10 A. M., and would subside about 6 P. M. He had suffered only a week, but he said it seemed like a month. The eye on the affected side (the right side) was greatly inflamed, and the tears were constantly flowing. The mucus, from the right nostril, also flowed profusely. This I believed to be a case of *true* neuralgia, and I gave him the following :

R Quinia sulph.....	grs. xxiv
Acidum sulphuricum, (dil.).....	ʒ j
Elixir taraxacum.....	ad. q. s.... ʒ ij

M.—Sig.—To be taken in four doses; one dose every three hours.

He called two days subsequently and reported a perfect immunity from pain. I have not seen him since, and therefore believe it has not returned. A rule which I have adopted is as follows : When a patient presents himself, whether suffering pain or not, to first carefully remove the salivary calculi and cleanse the teeth ; then medicate if the case requires it, then extract every fang in the mouth, deprived of its crown, excepting, of course, those which may be restored to usefulness by mounting them with crowns. This done, I am prepared at the next sitting to make a more intelligent diagnosis for neuralgia or other affections.

We should firmly object to allowing our patients to dictate what we shall do. If they wish our services, and have confidence in us, we should insist on doing what we know to be for their interest.

Scorbutic Disease and the Teeth.—Dr. Geo. Watt says : Whenever a tendency toward scorbutic disease shows itself in any patient, he should be restricted to fresh food, vegetables, acid fruits, pickles, etc. ; and if he eats flesh meats, the quantity of salt used with them should be limited. “Good old ham” should be avoided. By a

little care, when scorbutic symptoms appear, the most common variety of caries may be prevented in great measure, or, if it has already made its appearance, much can be done in this way to arrest its progress, and thus bring all the teeth to a condition in which the decay will be arrested by filling. It is often a reproach to our profession to see finely finished, perhaps contour, gold fillings, in a number of teeth in a patient's mouth, where the tendency to decay is so great that the margins of the cavities soon decay around the fillings. I have heard operators, in such cases, explain to the patients that they had received the very best treatment that dentistry affords, and call attention to the fact that the fillings were still tight. Believing the statement, the patient concludes that filling teeth is an unreliable operation, and ever afterward he allows caries to carry on its depredations unmolested by any efforts to the dentist. A knowledge of pathology and chemistry sufficient to enable him to recognize the condition of the mouth, and to restore it to its normal state, was the great want of the operator in the case just described. Yet far too many dentists think their duty is done when good fillings are nicely inserted, whereas it often happens that their most important duty to the patient, is to place his mouth in a condition fit to have teeth filled in it.

HEART BEATS.

Dr. N. B. Richardson, of London, the noted physician, says he was recently able to convey a considerable amount of conviction to an intelligent scholar by a simple experiment. The scholar was singing the praises of the "ruddy bumper," and saying he could not get through the day without it, when Dr. Richardson said to him :

"Will you be good enough to feel my pulse as I stand here?"

He did so. I said, "Count it carefully; what does it say?"

"Your pulse says seventy-four."

I then set down in a chair and asked him to count it again. He did so, and said, "Your pulse has gone down to seventy."

I then lay down on the lounge, and said :

"Will you take it again?"

He replied, "Why, it is only sixty-four; what an extraordinary thing!"

I then said, "When you lie down at night, that is the way nature gives your heart rest. You know nothing about it, but that beating organ is resting to that extent; and if you reckon it up it is a great deal of rest, because in lying down the heart is doing ten strokes less a minute. Multiply that by 60, and it is 600; multiply it by 8 hours, and within a fraction it is 5000 strokes different; and as the heart is throwing 6 ounces of blood at every stroke, it makes a difference of 30,000 ounces of lifting during the night—1888 pounds.

"When I lie down at night without any alcohol, that is the rest

my heart gets. But when you take your wine or grog you do not allow that rest, for the influence of alcohol is to increase the number of strokes, and instead of getting this rest you put on something like 15,000 extra strokes, and the result is you rise up very seedy and unfit for the next day's work till you have taken a little more of the "rudey bumper," which you say is the soul of man below."

THE TEETH AND JAWS OF THE INHABITANTS OF THE TERRA DEL FUEGO.

DR. GALIPPE.

Resume of a paper read before Societe de la Biologie, by Dr. Galippe and M. Hyades.

We were struck with the enormous development of the upper and lower jaws. The shape of both the superior and inferior maxilla, is quite regular and symmetrical, forming a semi-circular curve. There is not much projection of the lower jaw. It is seldom of the alveolo-dental variety, and depends rather upon the great size of the maxillary arches than upon the slanting implantation of the teeth; these are, on the contrary, the larger number of cases, placed perpendicularly to the direction of the axis of the maxilla. The arch of the palate is quite horizontal. The expression of the mouth is peculiar. Kissing and smiling are unknown.

The teeth of these people are long and strong, though not very thick at the neck. The size of the canines is in proportion to that of the other teeth. The triturating surface of the molars is large; it seldom presents any supplementary tubercles, and its size decreases from the first to the third molar, which is occasionally quite rudimentary. Darwin's views are quite negative, for he considers that among the higher races the wisdom tooth is progressively disappearing; and he looks upon the Fuegians as the lowest types of the human race—which is not correct.

The physical properties of these teeth as a rule are much greater than ours. The Fuegians are a right handed people, and their teeth are more dense on the right side than on the left. The upper milk canine is often retained and the permanent one often grows outside the dental arch.

The Fuegians' teeth are often very much worn down; but this wearing away is of no use in the calculation of their ages, because it is met with both in children and adults. It is due to the way these people use their teeth instead of hand vices, and also in a measure to the hard nature of some of their food. The teeth of some resist, while those of others wear away.

The inhabitants of the Terre del Fuego also cut their teeth

earlier than we do. Thus the wisdom teeth appear at the age of twelve or thirteen. Dental caries is seldom met with among them.

The Fuegians have no notion of any hygienic measures for the mouth or teeth.—*British Journal of Dental Science.*

Traffic in Dental Diplomas.—Dr. F. H. Rehwinkel, of Chillicothe, Ohio, at the meeting of the Missouri Dental College alluded to the traffic in diplomas, carried on by the Wisconsin Dental College. He recently had a letter from Dr. Peterman, of Frankfort-on-the-Main, stating that this disgraceful business is in full blast again, complaining of the utter indifference of the dental profession, and that no effort is made to stop the dirty commerce. It would be remembered that in the case of the Buchanan College of Pennsylvania, it was left to a member of the press to begin the fight. Dr. Peterman engaged in a seven years war, and he is now ready to take up the gauntlet with the Wisconsin Dental College, and wants the aid of the profession in America. These diplomas are not worth the paper on which they are written. Their issue may be legal, because of the lax laws of that State. Every State should take it up and bring pressure to bear on the State of Wisconsin to have the charter repealed. About two years ago an offer was made to him of a diploma on parchment for twelve dollars, and he felt disposed to resent it. He believed it to be the duty of the profession to knock the traffic on the head. As the Wisconsin College has a legal existence it would be necessary to move, as in the case of Buchanan College, through the legislature of the State. The government of Germany has already taken notice of it, and the matter will probably be made one of diplomatic correspondence, but it would be well to take action to strengthen the hands of the Germans.—*Archives of Dentistry.*

[Is it possible the Dentists of Wisconsin can do nothing in this matter?—ED. ITEMS.]

WHY DOES A RUBBER PLATE CAUSE UNDUE ABSORPTION?

L. P. HASKELL, CHICAGO.

Why does the heat of the mouth—under a non-conducting plate like rubber increase the absorption of the alveolar process?

While this is the usual way of stating the case, it is not exactly correct, although the results are the same.

The undue heat thus retained lowers the vitality of the tissues, and thus *impairs nutrition*, so that the worn-out material, constantly being removed from all tissues, is *not replaced*, and the result is permanent shrinkage.

Undue pressure, at any point, effects the same results, for the

same reason. And when you have both heat and pressure combined, the results are intensified.

How important, in view of these undeniable truths, is it that patients should always be advised in regard to the matter, when consulting the dentist.

It does not make so much difference in the case of a person well advanced in years, but it is sad to think of the thousands of the young and middle-aged persons whose mouths are irretrievably ruined by the use of non-conducting plates.

[When will this "vexed rubber question" be settled? Our experience with rubber is not so unfavorable.—Ed. ITEMS.]

PROCEEDINGS OF THE PENNSYLVANIA STATE DENTAL SOCIETY.

DR. WILLIAM H. TRUEMAN, PHILADELPHIA.

The Sixteenth Annual Meeting of the Pennsylvania State Dental Society convened at the Wyoming Valley Hotel, Wilkesbarre, at half-past ten o'clock, Tuesday, July 29th, 1884. The President, Dr. S. H. Guilford, of Philadelphia, in the chair.

The meeting was opened with prayer by Rev. Dr. Hodge. Dr. C. S. Beck, of Wilksbarre, welcomed the society in an address, of which the following is a resume:

MR. PRESIDENT AND GENTLEMEN:—The honor and pleasure of this hour brings to remembrance the same position I occupied in this body ten years ago; and to-day as then, my heart speaks its deepest emotions when I extend to you a most hearty welcome to our beautiful Valley of Wyoming. In retrospect of these last ten years, every man who looks into the dental literature of the day will perceive that our science is advancing with unprecedented rapidity. Histological investigation has done much for us, and has illuminated with the light of knowledge many of the dark spots of our profession. What has already been done in the past can be regarded as an earnest of what we can and will do in the future.

But as every joy has its accompanying sorrow, so this hour is touched with pain. Our profession has gone on and upward, but some of the lights that illumined it when we last assembled in this room have been extinguished. Meetings like these, where each has opportunity to express his own opinions and to compare those with others, are of untold good to our profession. Many erroneous ideas are here corrected, and many new theories advanced. Instead of each working separately and at great disadvantage, we work as one organized body, every member of which is ready to give assistance to his fellow laborer, and is ever eager to applaud success or condole failure. These meetings are beneficial not only professionally but socially. How often are the bands of friendship fast riveted by the

heat of discussion. Let us hope that an association that has for its object good fellowship, the advance of science and the amelioration of human suffering, may have nothing but success. Gentlemen, in bidding you once more welcome, I hope you may all enjoy your visit to Wilksbarre, and that this meeting may be productive of both pleasure and profit.

The Committee on Enforcement of Dental Law reported, that only one case had been brought to their notice, and, owing to its surroundings, it had been allowed to go by default. The good of the law should not be measured by the number of prosecutions brought under it. They had ample evidence that many young men took a thorough college course who would not have done so if the law was not in existence; and had no doubt but that those men were better dentists, and were serving the communities in which they lived far better, than if they had not. This is what the law is designed to do. In time the necessity of a proper qualification before beginning practice will be generally recognized by the public, both for dentists and physicians.

Dr. J. C. Green, of West Chester, read the report of the State Examining Board. Three gentlemen had presented themselves for examination, and had received certificates of qualification. The Board were pleased to report that the candidates this year were far better prepared for the examination than any who had previously appeared before them.

Announcement was made of the death of Dr. D. T. Way, of Bedford, and Dr. T. L. Buckingham, of Philadelphia.

AFTERNOON SESSION.

The following is a brief resume of the President's address :

In conformity with the requirements of a time honored custom, it is my privilege to-day to address you on the occasion of our annual gathering—the sixteenth anniversary of our organization.

During these many years, as we have met from time to time, recognizing familiar faces and extending to each other the right hand of fellowship and affection, we have been drawn closer to each other, partly by friendship and partly by the common interest we feel in the advancement of our profession. In the earnestness of our work, we have scarcely noted the fleeting years, or what they have brought or taken with them. It may be well, therefore, to recall the earlier history of our Society, and see what we have accomplished. Sixteen years ago the Lebanon Valley and Harris Dental Associations met together at Litz, a little Moravian village. The joint meeting of the two societies had been proposed and called for the sole purpose of social and professional improvement; but such was the benefit felt to have been derived before it was half over, that the question was

raised—if two societies can meet together with so much profit to all, why may not a combination of many societies be productive of still greater good? After talking the matter over, a committee was appointed, consisting of the president and secretary of each of the two societies, to draw up a circular to be addressed to each of the local societies of the State, requesting them to send delegates to a proposed meeting with a view to the formation of a State society.

The response to this circular was prompt and general, and, as a result, the representatives of the various societies met in Philadelphia on the first day of December, 1868, and there and then fully organized this society. So general was the interest in the movement, that every dental society and college in the State was represented. This interest sprang not alone from a feeling that social intercourse and interchange of professional thought would be widened and advanced by the formation of a State society, but from a feeling perhaps more potent than these; that protective legislation was needed, and could be best added by such united effort.

He then spoke of the causes which led to the desire for legislative action, and gave a history of the first dental law in this State, from the first draft adopted at the meeting referred to in Philadelphia, to its final passage eight years after, and of the difficulties encountered in convincing the legislators of that time that the bill might have real merit although there was "no money in it." The opponents of the bill for a time had more influence than those who favored it; but by persistent and constant efforts, and changing and modifying the proposed law from time to time, it was finally passed. While not all that was desired, it was all that could be obtained, and the society congratulated itself upon the result. It was soon found that the law was faulty in several of its provisions, and since then it has been amended as deemed desirable. The efforts to enforce it have not been very successful, owing to ignorance or incompetency of judges and sympathy of juries with the violators.

Its moral effect, however, has been more than the most sanguine had hoped for, and has resulted in many presenting themselves to the State examining board for examination and a certificate of qualification. While the immediate increase of the college classes, which still continues, prove that many more have determined to enter the profession in the regular way.

He then reviewed the present position of the profession in contrast with the past, and noted the steady progress it had made, as shown by the greater attention given to dental colleges. Not only are there more colleges than formerly, but a larger proportion are entering the profession through them. The profession is also taking a greater interest in them. They have spurred them up, and, under this influ-

ence and the assistance they have received, their facilities for imparting instruction has been steadily improved. The demand is now made that they be more stringent in their requirements and more rigid in their examinations. Rest assured the colleges will not be behindhand in this good work. In the future, as in the past, they will earnestly assist in every effort for the general good.

Encouraged by the good already done, he urged all to show a deeper interest in the society by regular attendance upon its meetings and a willingness to perform all duties assigned to them, and a hearty support of all means adopted for the general good, and to so strive to increase its usefulness, that the accomplishments of the past shall grow dim in contrast with its future achievements.

He then feelingly referred to the death of Dr. Buckingham, who since our last meeting, full of years and of honor, had been called away. He was one of the original members and was rarely absent. He spoke of his interest in the meetings—his willingness to contribute to their interest or profit, whenever called upon, and of his sterling good sense and ripe experience.

Dr. C. N. Peirce, of Philadelphia, read a paper upon "Calcification and Decalcification of the Teeth."

He referred to a paper he read at the meeting held in July, 1877, upon "The Origin and Progressive Development of Tooth Germs." (See *Dental Cosmos*, August, 1877).

In the present paper he continued the history of the tooth, treating of the periods of calcification of the teeth and the absorption of decalcification of the roots of the deciduous teeth. In the careful examination of such animal tissues as are impregnated with lime salts, it is evident that they, like vegetable structures, have periods of growth and of rest, and that while these conditions are normal, they are greatly modified by what we term the function of nutrition. In studying the progressive solidification of tissues, we can, with a degree of certainty, mark the beginning and the end only, the intermediate lines merely approximate, yet they are near enough to exactness to give an idea of the condition of the average tooth at a certain age to serve as an important guide in the performance of many necessary dental operations. (The doctor here referred to a drawing, showing at a glance the supposed condition of the teeth, as regards their calcification or decalcification, from its first calcified appearance in the embryo until the denture is complete.)

He briefly reviewed the development of the teeth, as shown by the investigations of Dr. J. L. Williams, and especially called attention to the condition of the teeth at about the close of the third month after birth. Then the infant enters into the critical period of its life, and from a glance at the condition of the twenty deciduous teeth, it

is fair to assume that this condition has not a little to do with the various abnormal systemic lesions or disturbances to which the child is liable at this age. In close proximity to the sharp and irregular edges of the calcifying extremity of each partial tooth crown lies the vascular papilla—the primitive tooth-pulp—and any want of correspondence between the absorption of the over-lying gum at the coronal extremity and the deposition of solid matter at the calcifying or papillary extremity, must produce by this retarding influence an irritation limited in its extent by the number of teeth advancing and the duration of the cause. When the irritation becomes pathological, it seems hardly necessary to remind you of the great advantage to be gained from the free use of the lance.

He then referred to the importance of knowing how far calcification had progressed, when the deciduous teeth need attention early, in cases where the pulp is exposed, or nearly so. Pulps are sometimes exposed while yet the root is not completed in its growth. The impropriety of resorting to the ordinary method of pulp devitalization is, under such circumstances, very apparent. He stated that the deciduous teeth were much less frequently subject to malformations and defects, arising from deficiency in the quantity and quality of enamel and dentine, than those of the permanent set; and explained that this was due to the crowns of these teeth being largely provided for in embryonic life, so that the fetus invariably escapes the consequences of imperfect nutrition, which is so common after birth. The permanent teeth during the periods of calcification are constantly subjected to the influence of morbid systemic conditions; should these occur while the crowns of any of the teeth is undergoing this process, markings or defects, located at the point of calcification, and limited in extent, or modified by the severity and duration of the lesion, will usually result. The fact that the third molars are developed during the period of childhood and youth, and while the system is liable to frequent conditions which impair nutrition, is probably a potent reason for their lack of usefulness and durability.

The decalcification or absorption of the roots of the deciduous teeth is a somewhat obscure physiological process, and we have found it extremely difficult to do more than approximate the time at which it is carried on. The average period at which it commences will be sufficient to indicate the time when much care will be necessary in the application of arsenical paste for the devitalization of the pulp, and the subsequent treatment of the pulp chamber and root canals. We can only judge how far the process has gone on by the general condition of the mouth. It varies so widely in different families, that it is impossible to tabulate its progress with any degree of accuracy. We have spoken of this absorptive process as being physiological and

somewhat obscure. It certainly is both, and in contradistinction to the evolution of the tooth, may be termed its dissolution. What induces this process has never been satisfactorily explained. That the organ has served its purpose, and that the nourishment which had previously been appropriated by it is diverted or relegated to its successor, is probably the most plausible explanation we can give of this interesting physiological process.

In recording the periods of calcification of the deciduous and permanent teeth, it should be noted that in many instances a want of correspondence between their calcification and eruption exists. By premature removal of the gum, the crown is frequently exposed, while yet there is no root calcification, as instanced in deciduous incisors erupted at birth, their crowns only being calcified, which is the normal condition of these teeth at that age. Again, not infrequently the persistence of the deciduous cuspids and molars, as well as of the indurated gum over an advancing permanent molar, causes delay in the eruption of the permanent teeth until after the calcification of their roots is completed. These instances illustrate that in one case eruption takes place without the development of the root, and in the other we have complete development of both crown and root without eruption. In closing his remarks, he referred to the investigations of Dr. G. V. Black, of Jacksonville, Ill., upon the same subject, stating that they closely corresponded with his own.

In the discussion which followed the reading of the paper, Dr. E. T. Darby called attention to the importance of lancing the gums early, before the irritation had so far advanced as to seriously affect the child's health. If done too soon there was but little risk of injury, while if postponed too long the consequences might be very serious and the operation prove of but little benefit.

Dr. Gerhart, of Lewisburg, asked: What should be done in a case where the deciduous tooth is in place, in fair condition, and no sign of the permanent tooth, the patient having passed the age when the change should have taken place? He had had similar cases where he had not removed the deciduous tooth that had resulted in serious irregularity, and had had cases where he had, and the permanent tooth had failed to appear. He knew a gentleman over forty-five years of age, with more deciduous teeth than permanent. Several expressed the opinion that it was best not to remove a deciduous tooth in fair condition until there were indications of the permanent tooth. It might be that the germ of the permanent tooth was absent, and in that case the deciduous tooth was better than none, as long as it would remain. On the other hand, it was suggested if the deciduous tooth was removed, if the germ was there, the absence of the baby tooth would probably stimulate its development; if the germ was not there the teeth would close up and an unsightly space be avoided.

LIFE INSURANCE.

DEAR SIR:—I notice in the August number of the ITEMS your very sensible editorial on the subject of "Life Insurance." The advice therein contained is brief and to the point, and should be heeded by every member of the profession to whom it was addressed.

The question of life insurance is no longer one of doubt. It is now generally conceded that the man who creates a family is clearly bound, in duty and in honor, as well as by affection, to provide for them until they are old enough to support themselves. For this purpose his life has a money value, and, unless he has sufficient invested free from the uncertain chances of business, he can secure it in no other way than by life insurance. Statistics show that only about *three* men out of *one hundred* succeed in life financially, and that the other *ninety-seven* either die poor or leave an estate too small to be of any special benefit to their families. Therefore ninety-seven per cent. of all the money distributed by life insurance organizations becomes an insurance against all the disadvantages and evils of poverty. This applies as well to the dentist as to those in any other walk in life. The only question that remains is, the best means to effect the end. The excessive premiums demanded by the old line life insurance companies has heretofore deterred many from availing themselves of the benefits to be derived from them. But of late this difficulty has been largely overcome by the organization of numerous mutual, or co-operative, associations, operated through a system of assessments; and, while the plans adopted may be open to objections in some particulars, they all, or nearly all, have the effect of giving to the man of limited income a cheap and reliable means of providing for his family in the event of an untimely death. In other words, it enables the average man to provide the largest possible amount of insurance for his family during the years when they most need it, and that too in such a manner as to be little drain upon his finances. The great number of these organizations now in existence enables a man to select one with plans in accordance with his own views.

In closing I would call the attention of your readers to the claims of the "DENTISTS' SCIENTIFIC AND BENEVOLENT ASSOCIATION," of Kansas city, Mo. This association is composed exclusively of members of the dental profession and dealers in dental goods, and has, among its other objects, the provision of pecuniary aid to the families of deceased members. Although but little over one year has elapsed since its organization it numbers among its members some of the most prominent members of the profession in the country, and its officers are all responsible and well-known gentlemen. As an argument in its favor it has as a provision that none but members of some regularly organized dental society are eligible to membership. By this means it

not only acts as a stimulus in increasing the membership of our societies but, from an insurance standpoint, offers advantages possessed by no other similar association, because its membership is drawn from among a single class, and its restrictions such as to take only the representative element of that class. Another commendable feature is that it was organized and is managed by members of our own profession, who have no other end in view than that of the general good of their fellow man. The officers, for the present at least, are working without fee or reward, which makes the conduct of its business comparatively inexpensive.

Brethren of the dental profession, this is a movement long needed among us; a few men in the West have given it a start; let us all give it the encouragement it so richly deserves. The secretary, Dr. R. I. Pearson, resides at Kansas city, Mo., and anyone desiring a copy of the constitution, or other information, can procure it by addressing him.

W. O. KULP.

DAVENPORT, Iowa.

FOR TOBACCO-LOVING DENTISTS.

From the time we were able to judge between right and wrong we have been opposed to the use of tobacco. Especially since we have been a dentist have we believed that the less the mouth and teeth have to do with the weed the better, except it be to speak against its use. The following little incident may have a bearing in the right direction with our fraternity :

More than twenty years ago a middle-aged, intelligent lady stepped into the office, when the following dialogue took place :—

“ Good morning. Is thee the dentist ? ”

“ They say so. What’s your pleasure, ma’am ? Please be seated.”

“ First, let me ask thee a question or two. Does thee use tobacco ? ”

“ No, ma’am.”

“ Don’t chew ? ”

“ No, ma’am.”

“ Smoke ? ”

“ No, ma’am.”

“ Use tobacco no way ? ”

“ No, ma’am.”

“ Then, thee shall be my dentist, for I’ve been hunting for a dentist who don’t use tobacco, and thee’s the first one I have found.”

J. A. MARTIN, D.D.S.

STRASBURG, Pa.

Pewter is four parts tin and one part lead.

"AN" HOTEL.

DEAR DR. WELCH:—A friend of mine—a teacher in the public schools of Boston—called my attention to an article (“Poor Dentist’s Recreation”) in the August number of ITEMS, and the last sentence of first paragraph, which reads: “But, often the dentist’s purse will not allow him to board at AN hotel, at from fifteen” etc. This reads rather smooth, and I like it. Is it an error of the printer? If not, indulge me with your authority for this construction, and greatly oblige,

Your friend,

C. F. RICH.

SARATOGA SPRINGS, N. Y., Sept. 17, 1884.

[Webster is our authority. See his Unabridged.—Ed. ITEMS.]

Diagnosis.—A Connecticut physician supposed himself to have lost one lung by consumption. This supposition was confirmed by a careful examination at the hands of an eminent surgeon in New York, and by the unanimous verdict of several other physicians. His life was governed by the supposed peril for many years. But death revealed the fact that he and his many physicians were all wrong, as both his lungs were perfectly sound; his sole trouble being of the stomach, and this brought on by generous living in the hope of prolonging a consumptive’s life. Thus again we are reminded of how little the best of us know of the significance of symptoms.

Rum in New York.—The population of the city is estimated at 1,250,000. There are 10,075 drinking saloons, a proportion of one to 125 of the population (juvenile and adult). Estimating a family of five persons, every twenty-five families maintain the twenty-sixth to supply them with liquor. . The butchers’, bakers’ and grocers’ shops of the city number 7,197, the shops for the sale of liquor number 2,878 more than those for the sale of food. Of the twenty-four members of the Board of Aldermen ten are liquor sellers and two ex-liquor sellers (all saloon or dram-shop men).

Softness in gold foil is appreciated more and more; and hardening it by passing it through a flame when using it is more and more depreciated; while the existance of softness and cohesiveness in the same foil is increasingly valued by those who become acquainted with it. We are glad it is procurable and hope no dentist will be satisfied til he has tried it.

As an antiseptic wash and disinfectant for the spittoon, Dr. Geo. Watt recommends sixty-seven per cent. of carbolic acid, and thirty-three per cent. of resorcin, with the addition of water to any desired extent.

"PIVOT CROWN" AGAIN.

Dr. Howard's method of setting the "Bonwill Pivot Crown"—on pp. 446 of THE ITEMS—certainly avoids the discoloration due to the use of amalgam, but discards one of the essential features of the Bonwill setting—*i. e.*—the additional strength of a continuous filling between root and crown. As Doctor H. has it, his crown and root fillings are divided by the gutta percha, and the pin alone bears the strain at that point. I have found nothing so reliable as a good quality of amalgam. There is some discoloration truly, but it may, with care, be reduced to the minimum. The setting may be made more positive and certain by the use of the How Screw Post in place of the ordinary platinum wire or Bonwill Pin. For this, some of the How appliances are necessary, the drill, drill chuck, screw taps and screw post chuck; the larger sizes screw posts should be used. Prepare the root as usual and use the appliances as directed for use with the How crowns. It is simple, easy and positive. After the post is firmly set in place, aligned, and cut off to proper length, it is my custom to split the end of the post which may be done with a fine saw or screw head file. After the crown has been set into place, with a wedge shaped instrument I gently spread the end of the post, which, by the way, is intended to extend into the opening on palatine or grinding surface of the crown. The object is obvious, the split should only be as deep as the bottom of the external cavity in the crown. If deeper, greater caution is needed not to split the crown in spreading the end of the post. To set the crown firmly into place, whether amalgam or zinc phosphate is used, requires considerable force. In order to do this with the least danger to the porcelain crown, I use a stick of "hard" modeling composition. By worming one end of this stick, and pressing the crown into it, as far as may be necessary, I have when cooled, a perfect "adjuster." I am very partial to the use of the screw post for pivoting, not only because it is positive in its hold on the root, and because of its strength, but it can be more easily removed should occasion require. Anyone who has ever been called on to dig out of a root an ordinary barbed wire, especially if set in amalgam, will appreciate this.

ALTON, Ill.

C. B. ROHLAND.

The secret of avoiding porousness in vulcanizing thick rubber, is to vulcanize at a low temperature—say at 300°—and keep it there two hours and a half. When it comes out of the vulcanizer the plate is near *porous*, and takes a fine polish. The whole secret in having a good, compact plate, free from imperfections, is to have the rubber thoroughly cured, and the only way to accomplish it is to vulcanize at a low heat, and to give sufficient time.

MC PHERSON, Kansas.

JOSEPH SPYER, D.D.S.

Editorial.

LIFE INSURANCE.

Five thousand dollars in bank! That is a nice nest egg. But to have a life insurance of five thousand dollars is better. A man with a good bank account has a right to strut about, a little proudly; but he who presents to his dear ones a policy of life insurance, mingles with his laudible pride a love, and shows a forecast for the inevitable, that says to them; "Here is a token of union and affection while we live, and an olive branch that shall bind and bear fruit when I am gone."

1st. Life insurance is one of the safest investments for future use. Banks are measurably safe, but life insurance companies are safer. How many have been known to fail? Only a few succumbed during the great panic, when banks and other moneyed institutions crumbled by scores and by hundreds. The State throws around life insurance companies greater safeguards, and requires of them stricter account, than any other class of trusts. They are prohibited many risks that it is the legitimate business of banks to take. To hear of a man losing a life insurance by any fault of the company is a rare thing, though there are thousands maturing monthly.

2d. *It promotes economy.* Some of us can save for money's sake alone, but most of us need a stronger motive. Pennies are pretty sure to burn a hole in a boy's pocket, unless kept in a strong wallet for some special purpose; and lose change with us who are older, is quite liable to be lost or thrown away. A cigar is but five cents, a gew gaw is but a dollar, a foolish spree costs but a V; then wife learns to imitate husband, not in the same things, but with the same foolishness—and so the money goes. But a life insurance is an incentive to break off little extravagances, and useless, expensive habits, so that, really, life is made better, and there is an accumulation surpassing the requirements of the insurance.

3d. *Life insurance is a certain amount laid by that is not easily disturbed.* Ever and anon, unusual inducements for investments are presented, or temporary losses solicited, which, if it takes but the scratch of a check to bring from the bank, the temptation is great. Some of these outside investments prove profitable, but others bring ruin. A policy of life insurance is not so easily disposed of; and when we are tempted in this direction, the sacredness with which wife holds on to it, makes it seem almost sacrelijious to hazard it. Though some tempting speculation or some terrible disaster sweeps everything else away, this remains.

4th. *It is generally so much saved that would be otherwise spent.*

How often we have made the remark that we have not missed the amounts spent in insurance. Though we have kept up a policy for more than twenty years, we have never felt the poorer for what it has cost us. We have spent too profusely anyway, and it has been a good thing to have some investment so safe we could not reach it, and so valuable it must be taken care of.

5th. It gives a habit of forethought, and disciplines us to be forehandy. It will not do for the premium to come due without the money to pay it, for a miss once jeopardizes all we have invested ; or if we are happily in a company that will compromise with us, it must be at a loss. No, no ; the payment must be made on the very day it is due, and the older the policy the more important. However therefore we may be pinched in this or that direction, we must and will lay aside a little regularly for this, and a reckoning will be made to see that we are not left behind. If this responsibility is not safe with the husband, it is made sure with the wife ; and while each is thus a check over the other, both are trying to be ready for the future in more respects than one ; for the habit of forecast in this gives character for forecast in everything.

6th. *It fosters goodness of heart and promotes fellowship.* We men are selfish beings, any way. Most of us need something to prevent merciless business smothering warm affections. And what is left when our social impulses are chilled ? Life insurance brings "wife and I" a little closer, and, like the baby, warms our hearts together.

7th. *It relieves us of much anxiety.* Without insurance, how often we find ourselves saying : How sad, if death should come when I am so unprepared as now ! I had expected by this time to have gathered a little competence, but alas ! And specially, if we are taken sick, how natural to still farther emphasize this thought, even to anxiety. Many a sickness is made serious, and perhaps fatal, by a consciousness that our dear ones would be left destitute, were we taken away. But the fact that we are prepared for death is a solace at all times. "Fire ! fire !" cried my neighbors on a certain night. But I had not kept one ear open in anxiety. And so my office, a half mile distant, was consumed while I slept. "Doctor ! doctor ! cried a friend, at my door, as he returned from the fire without seeing me there. "Do you know your office is consumed, and we have saved nothing?" No ; I had heard nothing ; and thanking him for informing me, I soon dressed to go down. "Why, husband ; we are ruined, are we not?" "No, my wife," I replied ; though we have lost something, *we are insured.* How good that sounded to both of us. If I had never met with a loss, the constant freedom from anxiety I had experienced for years had compensated me for the cost of insurance. So with life insurance. We can lay ourselves down and rest. We are meeting current expen-

ses by industry ; we have provided for future exigency by insurance. Provident forecast has disarmed anxiety.

8th. Death is a certain event that comes at an uncertain time. "Good by, wife," said Supervisor Baldwin, as he left his home for the day. "Ah, Jinks ; going down town ? We'll walk together." They had gone but eight squares—a little fast to be sure—when Mr. Baldwin exclaimed "my God, what is that?" A pain had darted through his heart. In two hours he was brought home a corpse.

9th. *Life insurance is a wonderful relief for the dear ones left behind.* "You have quite a cold, Mr. Grant," said I to a neighbor entering my office one Monday morning, when I was a dentist in Winona, Minnesota. "Yes," he replied ; "I foolishly sat in the wind, Saturday, while making that fence opposite your house, to talk to a friend, and I caught cold." "Now, Mr. Grant, go at once to Dr. Pierce and be examined for a life insurance policy." "There it is again ; I can never come into your office, unless you talk life insurance." "Because I know the condition of your wife and three small children, were you taken away." "Well, now, to please you, I will go in." Returning, he said : "There now, I hope you are satisfied ; he said I must wait till I am over this cold." "Now go right to the North Western, and try them. If they accept you, I will lend you the money. They took him. Friday he died. Saturday the agent telegraphed to head quarters : "Grant is dead. Hold his policy." In an hour an answer came. "His policy is already on the road. Send proof of death and draw for money." Two thousand dollars came to the wife. What a godsend. With one thousand dollars the mortgage on the house was paid, taxes taken up on five hundred acres of land that had long been forfeited—then not so valuable, but now worth forty dollars an acre—and everything in and about the house made comfortable. The other thousand dollars was put out at interest.

Let me give another instance. Mrs. Brown of Sparta, Wisconsin, was so opposed to her husband getting his life insured that he did it secretly, and left the policy with the agent in Portage. Soon after the second premium was paid he left on business, and while on the water died and was buried in a watery grave. Mrs. Brown was obliged to leave her nice little home to the mortgagee; and, giving away one of her two children, left for Milwaukee to earn a living at sewing. In a few months she was obliged to part with her other child, and even then had hard work to support herself. When the year had nearly rolled round for the payment of the third premium on the life insurance, notice was sent by the company directed to her husband in Sparta, and thence it was forwarded to her. She could not understand it ; and thinking it a mere business notice of no present value she

threw it away. A month later she received a letter from the agent directed, as the first, to her husband at Sparta, who regretted that he had neglected the payment of the \$125.00 as the third premium. Mrs. Brown replied saying she knew nothing of any such debt ; and that at any rate he had been dead more than nine months and she was not able to pay anything. He came on to see her. Together they looked over her husband's papers for the two receipts on the policy ; and, obtaining the necessary proof of his death, he went to the company's office. In ten days she received five thousand dollars. Of course she got back her two darling children, paid the mortgage on her little home in Sparta and, re-entering it, lived in comfort upon what she would not hear to her husband providing for while he lived.

Can I say more ? Are not these hints sufficient ? Attend to this matter then yourself. Attend to it at once. The sooner a policy is procured the less yearly cost it will be, and the surer you are to be accepted ; for, at anytime, some disease may make you ineligible. Do not look for the cheapest company, unless it is also the best, and you are satisfied of its standing. Study the various kinds of policies well. If you are not prepared to take out a large policy, take a small one, and in six months take another ; but start with something *now*.

For dentists under fifty years of age the Scientific and Benevolent Association of Kansas City, Mo., is good, its taxes are so light. The good among the regular life insurance companies are too numerous to mention.

"EDUCATION."

Education has occupied a prominent place in the *Independent Practitioner* for the last four months ; yet through the whole thirty-two pages, it has hardly been more than a controversy between two colleges.

As an introduction, Dr. Hopkinson gives us some good thoughts on dental education, and if the practice of the Baltimore Dental College is as bad as he describes, it certainly deserves the tremendous thrusts he gives it. We have had enough quack colleges of mushroom growth, who sell diplomas to charlatans, to tolerate the same thing in one of the oldest colleges in the country.

But the reply of the professors of the Baltimore Dental College, would seem to show that it is far from guilty of such practice—that it only continues an old practice of granting the degree of D. D. S. on satisfactory proof of merit by thorough examination by all the professors ; that when the applicant has distinguished himself by long practice and high attainments in the dental profession, examination is deemed sufficient without a regular attendance upon the lectures.

If this is the real facts in the case, is there in it a thirty-two paged

sin? All who know the New Jersey gentlemen who have been the principal means of kicking up all this dust, know them to be the peers of the great mass of college graduates and very far superior to many of them.

Still, this expose may do good by making all colleges more careful, though we fear where there is one unworthily titled upon merit only, there are many who have walked through the whole length of the college who are sent forth deplorably deficient—a parchment, little more.

Now that the New York meeting of Dental Colleges, including the Baltimore, have spoken in such unmistakable language, there is no fear of charlatanism or even favoritism in any who belong to this combination.

The liquid of the oxyphosphate must be kept uncontaminated with the powder. We sometimes have it sent back to us as poor, when we find sediments of the powder in the bottom of the bottle. The spatula that is used for the powder must not be used so as to come in contact with the liquid in the bottle. If a little too much is poured out it must not be returned to the bottle if any of the powder has touched it.

Dr. Catching, of the *Southern Dental Journal*, seems to have quite the advantage of Brother Barrett, of the *Independent Practitioner*, on the subject of veracity. We don't mean to say that any one has intentionally lied; but brother B. will undoubtedly be very cautious hereafter in charging anything of the kind on Dr. Catching, and if he does, and the documents are sent him to disprove a misstatement, we think Dr. B. will prefer acknowledging his mistake rather than to have the proof in detail published by a rival journal.

Rather expensive bridge work is related by Dr. T. W. Buckingham, which he had lately seen in the mouth of a patient of the "Richmond Crown Company." It was pronounced by the wearer to be in every way satisfactory. There were ten or twelve teeth held in place by only two molar roots, one on each side. It cost four hundred dollars.

Gold Solder.—Dr. J. J. R. Patrick says that an easy flowing solder should never be mixed with any base metal. Jewelers or gold smiths never use any base metal in the solder. Take 20-carat and use 18-carat solder. You can use solder that will free you from the responsibility of the blow-pipe. He read this formula: gold, 89; silver, 7; copper, 4.

COOKING AND HEATING WITH GAS.

Dr. J. B. Rich, dentist, of New York, (37 West 22d street), has been conducting for some time past interesting experiments with gas stoves. The Doctor weighs the articles he bakes, boils, roasts, or otherwise cooks, and keeps an exact record of the quantity of gas consumed and the time occupied in cooking each article, or all together. The manner in which the experiments are conducted impart interest in the Doctor's investigations, and will insure, when completed, a pretty accurate conclusion as to the relative cost of coal and gas for cooking and heating purposes.

The gas stoves used in the experiments are from different manufacturers, and the Doctor has one of his own invention; but unlike most sanguine persons he does not think his stove much better than some others. But that there is vast economy in the use of gas for all kinds of domestic purposes the Doctor has not a doubt, and when through with his experiments the gas companies, gas stove makers, and the public are all to have the benefit of his investigations.

The sensations and effects of heat and cold are more similar than is generally supposed. If, without your knowing the one from the other, a piece of hot stone is placed in one of your hands, and in the other a piece of ice, it will be difficult, from your sensations, to tell them apart. If the stone is so hot as to burn, and the ice so cold as to freeze—for there is a wide range in the coldness of ice—not only will the sensations be similar but their effects, and the treatment necessary. If a piece of the nitrous oxide ice, referred to above, were dropped on your hand, you would be as apt to say it burned as that it froze the place, and it would feel like a burn afterward. With your eyes blindfolded let a pail of cold water and one of hot water be placed before you. Simultaneously thrust your hands in them, and then instantly alternate them. You will find it difficult to tell the cold from the hot. You need not be afraid of scalding yourself, for the temperature of one will counteract the effects of the other, and your hands will be neither cold nor hot. It is on this principle that candy makers can thrust their fingers into the boiling syrup to see if it is to the proper "wax." By immediately plunging their fingers into cold water there is no scalding, though the candy covers their hand as a thick scale.

The Minnesota Dental Association has had its first session. This State almost completes the circle of States; a few more left. Its officers for the ensuing year are taken from among its best operators.

Hot ice, ice actually in the temperature of boiling water, can be seen by placing it in an exhausted receiver. It is a singular phenomenon that even nitrous oxide gas, by pressure still beyond that which produces its liquefaction, will become frozen solid, and that once in this state it remains so for some time, because the pressure is so very far below that which subjected it to its solid form. When it does dissolve it does not return to liquid, but, like the frozen water in the hot exhausted receiver, it passes away gradually in imperceptible evaporation, leaving no liquid or even moisture upon the spot it occupied. One man thinks that the nitrous oxide gas could be sent to dentists through the mail in ordinary sealed tin cans, in the form of ice, instead of as now in the form of liquid in huge iron flasks, if it could be advantageously and speedily reduced to a gas as wanted. A hundred gallons of the gas are now condensed to about a pint of liquid ; in the form of ice—or more properly, perhaps, of ice-cream—the hundred gallons of gas would be reduced to a half pint. To bring it to gas again, with sufficient rapidity to fill a bag for a patient, artificial heat would be necessary ; you would have hot ice to make cold gas. This shows that pressure, as well as temperature, has much to do with freezing and thawing.

Ice can be kneaded like dough :—of course not as easily nor as speedily, and yet as actually. Put an irregular piece of ice in an iron mould, and apply severe pressure ; gradually it will assume the form of the mould without breaking or even cracking. It is on this principle that the great glaciers conform to the shape of the gorge through which they pass ; spreading out and becoming comparatively shallow where it is wide, and narrow and high where it is narrow. It is by this yielding sponginess of ice too that it so moulds itself around high rocks as it passes us to carry them along imbedded in a crystal tomb. These rocks may be rolled along underneath the glacier and thrown out at its terminus ; but often they are said to be picked up by and frozen into its substance. But this latter is hardly the right expression. Rocks from the bottom and the sides are incased by the gradual moulding of the yielding ice around them till they are made prisoners. It is this class of glacier rocks which have one side sometimes smooth by being rubbed against the surface of other rocks as they pass. Rocks falling upon these masses of ice become imbedded in them, not altogether from melting their way down, but also from their weight causing the ice to yield. Ice is not all of the same density, as well as not all of the same temperature. The ice at the bottom of a mighty glacier is much heavier than that near the top. Its particles are continually in motion, condensing and changing its form. The snow that falls on its surface does not melt into ice, but condenses into it as the weight of other snows comes upon it.

Beecher's Manual and Dental Directory purports to contain a list of the dentists of the United States, with other matter of interest to dentists. Of course, it is impossible to obtain a correct list; but evidently much pains has been taken to make it approximately so. The lists of some States are good; others are poor. While the Directory as a whole cannot be relied on, it will help many who would reach the dentists of certain sections. We have received a letter from Delaware complaining of its errors in the list of that State and of Maryland. The New Jersey list is poor. Asbury Park, with four dentists, is omitted altogether, and some other towns and cities are erroneously reported. A gentleman, writing of the New York list, says: "See if you can find in Mr. Beecher's list the following well-known towns and cities in New York:—Auburn, Baldwinsville, Booneville, Canandaigua, Cortland, Delhi, Dunkirk, Fredonia, Geneva, Goshen, Hudson City, Norwich, Nunda, Trenton Falls, Plattsburgh. These have from two to eight dentists each; in all over fifty dentists. There are twenty other towns omitted, having one or more dentists. Very many whom he reports as dentists are either dead or out of practice, and many of our most successful dentists are omitted. If this is the character of his list in his own State what must it be in other States?"

But we must remember this is Mr. Beecher's first effort. Perhaps he will learn wisdom by his present failures, should he attempt a second edition. In such an effort too, it may be hoped he will more uniformly give credit for valuable quotations.

Dyspepsia.—The London *Daily News* says in reference to the fact that dyspepsia is the scourge of the United States. "It is hardly to be wondered at that it should be, for nowhere in the world are children permitted to eat as they do in America. It is almost terrifying to see the pretty little creatures eat their huge heterogeneous meals at hotels and on steamboats, with a full compliment of ice-cream and hot coffee, and iced water without limit."

A recent calculation of the amount of money expended in this country for beer and whisky has been made by the St. Louis *Republican*. During the last fiscal year taxes were paid on 72,000,000 barrels of whisky, and on 17,000,000 barrels of beer. A gallon of whisky is said to give 100 drinks; at ten cents apiece the above quantity of whisky would amount to \$720,000,000. The beer comes to 4,216,000,000 pints, and five cents a pint makes \$210,000,000. Total annually expended for beer and whisky, \$930,000,000.

DENTISTS' BENEVOLENT ASSOCIATION.

The first annual meeting of the above organization was held at Sweet Springs, Mo., July 10th, 1884, President C. H. Darby, in the chair. About twenty-five members present.

Report of Secretary and Treasurer received and approved.

The following officers were elected for ensuing year:—

PRESIDENT—Dr. C. H. Darby, St. Joseph, Mo.; VICE PRESIDENTS—Dr. F. Swap, Boonville, Mo.; Dr. J. J. R. Patrick, Belleville, Ills.; Dr. W. H. Eames, St. Louis, Mo.; Dr. R. E. Nickles, Salina, Kansas; Dr. J. W. Reed, Butte City, Mon. Ter.; Mr. F. V. Combs, Chicago, Ill. SECRETARY AND TREASURER—Dr. R. J. Pearson, Kansas City, Mo. BOARD OF DIRECTORS—Dr. A. H. Thompson, Topeka, Kan.; Dr. J. A. Price, Weston, Mo.; Dr. J. M. Austin, St. Joseph, Mo.; Dr. Geo. H. Cushing, Chicago, Ill.; and Drs. G. W. Tindall, C. B. Hewitt, J. D. Patterson, H. S. Thompson, A. C. Schell, and J. S. Letord, of Kansas City, Mo.

This association is duly authorized by charter from the State of Missouri to carry out the objects of its organization. Composed exclusively of those identified with dentistry, and having no salaried officers or excessive expenses to encumber its progress, it offers to those eligible to its benefits a cheap and reliable means of providing for their families in case of death. For further information address R. I. Pearson, Secretary, 2206 Troost avenue, Kansas City, Mo.

WE take pleasure in calling the attention of our readers to the report of the annual meeting of The Dentists Benevolent Association of Kansas City, Mo., published in this number of the ITEMS. It is headed by some of the most responsible dentists of that region and some in other sections, and has among its objects that of providing financial relief and aid to the families of its deceased members. In other words it is a system of life insurance based upon the mutual or co-operative plan now so common in this country, and is composed exclusively of members of the dental profession and those identified therewith. Applicants for membership must not be over fifty years of age, and are required to pass a medical examination. The first fees are five dollars for initiation, etc., and two dollars advance assessment. After this the entire expense is only two dollars at the death of any one of its members, the benefits depending of course upon the number of membership. For instance if the membership should number one thousand at the death of a member his family would receive two thousand dollars. We have examined the plan as laid down in the Constitution and By-laws, and upon the whole approve of it. The movement is one long needed, and now that our enterprising western friends have taken it in hand we trust it will meet with the success it

merits in all sections. There is material in the dental profession for a membership of at least three thousand and we sincerely hope they will give it a favorable consideration.

MARY MCMULLEN'S TEETH.

Mary McMullen, who sued Dr. Schwarzschild, August 12th, 1881, a dentist for having charged her more than the agreed price for filling her teeth, and then removed the filling because she refused to pay, has recovered \$200 as damages, \$66 as witness fees, and \$17.50, the amount she paid defendant for work done.

THE Virginia Dental Association convenes at Norfolk, Tuesday, October 14th.

LEADING Florida dentists meet at Jacksonville, October 15th, to form a State association.

The Central Illinois Society meets at Pontiac, Tuesday, October 14th—not on the 9th as previously advertised.

STREATOR, ILL.

C. R. TAYLOR.

DRINKS FOR THE SICK.

ORANGE-WHEY.—The juice of one orange to one pint of sweet milk. Heat slowly until curds form, strain and cool.

EGG-LEMONADE.—White of one egg, one tablespoon pulverized sugar, juice of one lemon, one goblet water. Beat together.

SAGO-MILK.—Three tablespoons sago soaked in a cup of cold water one hour; add three cups boiling milk; sweeten and flavor to taste. Simmer slowly a half hour. Eat warm.

BAKED MILK.—Put a half gallon of milk in a jar and tie it down with writing paper. Let it stand in a moderate oven eight or ten hours. It will be like cream, and is very nutritious.

PUNCH WITHOUT LIQUOR.—Take the juice of six oranges and six lemons, adding sugar to suit the taste. Put to this a quantity of pounded ice and some sliced pine-apple, pouring over it two quarts of water. This is an agreeable summer beverage, for anybody, sick or well.

NEXT!

A little girl stood in the crowded street feeding her eye, her ears and her mouth; the former with sights and sounds, and the latter with a banana. She was all unconscious of acting a parable, or pointing a moral. While she pushed the banana to its bitter end, she hugged an orange under one arm and an apple under another. The

delight she felt in the banana was evidently in the expedition with which she could get through that and set her teeth in the apple.

Very childish this may seem. But it was very like the behavior of many grown people. There are few, indeed, who, while holding one good thing or pursuing one pleasure, are not thinking of the next. The present is only tolerable, and the pleasure to come pushes one into haste in despatching what is in hand. In amusement and in business the future is in the "good time coming," however agreeable the present might be, if only one would be content to think so. Contentment is a virtue as rare as it is excellent. In these days of "rapid transit" we hurry through the banana to reach the apple and the orange. The first would be all-sufficient if one would only take things quietly and get out of the occasion the best that can be had.

Pyorrhæa alveolaris, or Riggs' disease, Dr. Line has said, could not be cured. Certainly, in the cases where the pulp of the tooth is dead, I think it is a failure every time; but as long as the pulp is alive I think there is a very fair chance of success. About ten years ago, when Dr. Atkinson announced his method of treatment, a patient came to me with the four lower incisors very loose and a good deal of tartar on them, and asked: "What can you do?" I told him, nothing but clean and let alone; that they would probably drop out and that would be the end of it. He said: "I don't want to lose my teeth; I want you to do something with them. I will give you a few months' time to think about it, but you must then do something with them." After eighteen months the gentleman came back with the teeth in a worse condition than before. He repeated his demand. One tooth was so loose that he was afraid when he used it that it might drop out. I cleaned them again and used aromatic sulphuric acid. In cleaning one of the centrals it almost fell over. I took an impression and made a support out of a couple of gold wires which would keep the tooth in position, and I continued the treatment every other day or every third day, and in the course of about three months those teeth were as tight as any teeth in his mouth. That gentleman I saw again about six or eight months ago, and those teeth are just as firm to-day as any one of the teeth of the gentlemen in this room. Now I have fortunately found several other substances which are excellent. There is a preparation of coal tar called tartarate of chino-line. It is an astringent as well as a powerful antiseptic, and it is the best I have ever tried.—*Dr. Bodecker.*

Rub the oil cloth every two or three months with boiled linseed oil rub it well in with a rag, and polish it with a piece of silk. Or else, as it becomes hard, rub it well with a small portion of a mixture of beeswax softened with a minute quantity of turpentine, using for this purpose a soft furniture polishing brush. In cleansing the oil cloth do not use soap or hot water.